

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of:

Modernizing the FCC Form 477 Data  
Program

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) WC Docket No. 11-10  
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**COMMENTS of BROADBAND CENSUS LLC (BroadbandCensus.com)  
and MICROBRAND MEDIA LLC (BroadbandNow.com)**

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Broadband Census LLC and Microbrand Media LLC are two companies that have extensively engaged in analyzing, using, processing and publicly displaying broadband data in the United States. The principals involved in these two companies have had extensive experience with Form 477 Data, the National Broadband Map that was the product of the National Telecommunications and Information Administration, the Federal Communications Commission (“Commission”) and the 56 State Broadband Initiative entities, and with the data-sets that have been and that are produced by telecommunications carriers and broadband companies. Our companies and our principals have done this through analyzing Form 477 data that have been made publicly available through the FCC and the NTIA, and through other direct processes, including carrier data submissions.

The two entities are encouraged by some aspects of the FCC’s Further Notice of Proposed Rulemaking In the Matter of Modernizing the FCC Form 477 Data Program (“Form 477 FNRPM”)<sup>1</sup>, in WC Docket No. 11-10. They offer these comments in the spirit of constructive criticism, and with the intent to warn the Commission against a few potential pitfalls.

They submit these Joint Comments to highlight three key points:

1. The FCC’s proposed move toward greater public disclosure of Form 477 Data is a positive step that will enhance public, business, and community confidence in

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<sup>1</sup> *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Further Notice of Proposed Rulemaking, FCC 17-103 (Aug. 3, 2017).

information about the availability and speeds of broadband options.

2. The FCC's efforts to grapple with providing address level and sub-Census Block level broadband data is an appropriate step that is worthy of encouragement.
3. The proposal to collect Form 477 data on an annual basis, instead of on a semi-annual basis, is a move in the wrong direction and should be resisted.

Before we offer the core of our comments, allow us to provide a bit of background about the relevant experience of our two organizations:

Broadband Census LLC is the parent company of BroadbandBreakfast.com, a Washington-based news organization building a community of interest around Smart Cities, Infrastructure, Broadband's Impact and Rural Telecom. Founder Drew Clark has been an early advocate of Better Broadband, Better Lives. He launched BroadbandCensus.com in January 2008 as a way to crowdsource broadband data left unpublished by the FCC. The broadband data site and its sister organization, the Broadband Breakfast Club, helped drive debate around broadband investments under the 2009 American Recovery and Reinvestment Act. Clark was appointed Executive Director of the Partnership for a Connected Illinois, or the State Broadband Initiative, under Illinois Gov. Pat Quinn. He led a combined federal and state effort of more than \$350 million in fiber-optic and wireless infrastructure investments, including broadband mapping, economic development and digital literacy training. Under his direction, the state launched the Illinois Broadband Innovation Fund and the FCC awarded one of its first broadband lifeline grants to rural Western and Southern Illinois.

Microbrand Media LLC is best known for its interactive and analytical tool available at <https://BroadbandNow.com>. The main focus of BroadbandNow is to unlock the power of large data sets, including Form 477 and prior NTIA releases, to help consumers, businesses, and government organizations make informed decisions. To do so, BroadbandNow analyzes more than a billion rows of data. BroadbandNow also aggregates speed test data, user reviews, internet

protocol-verified reviews, and more.

**Greater Transparency of Form 477 Data Would Provide States, Communities and the Public with Necessary Information About Their Broadband Options**

The usefulness of the Form 477 data has long been limited by artificial efforts to keep data that is otherwise naturally public, out of the hands of the public.

Now, fortunately, the Federal Communications Commission seeks comment on its proposed revision to the formerly confidential treatment of broadband information. In particular, the Commission:

“[P]ropose[s] that certain collected data that are currently treated as confidential be made public. First, we propose that minimum advertised or expected speed data for mobile broadband services should not be treated as confidential, and we propose releasing such data for all subsequent Form 477 filings going forward.”<sup>2</sup>

“[P]ropose[s] that, if detailed propagation model parameters are submitted in the Form 477 filings, some of these parameters should be treated as public information, as we believe that such parameters are not competitively sensitive.”<sup>3</sup>

As the Commission notes that “increased public access to disaggregated subscription data could have significant benefits,” and that “these benefits may outweigh any confidential interests for some disaggregated subscription data,” the Commission “seek[s] comment on whether disclosure of this information would be beneficial....”<sup>4</sup>

Additionally, the Commission proposes that even if disaggregated data not be made

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<sup>2</sup> *Id.*, para. 51.

<sup>3</sup> *Id.*, para. 52.

<sup>4</sup> *Id.*, para. 53.

available immediately, such data could well be made available after some period of time.<sup>5</sup>

BroadbandCensus.com has long urged that the Commission abandon its dated and provider-driven attitude toward the release of broadband information. In response to the FCC's Notice of Inquiry In the Matter of A National Broadband Plan for Our Future in April 2009,<sup>6</sup> BroadbandCensus.com wrote:

First, the Commission may decide that the creation of a comprehensive national broadband policy warrants the release of Form 477 data. Just as the establishment of the interstate highway systems required the development of a sophisticated set of consumer road maps, a national policy promoting broadband infrastructure might likewise require more detailed consumer “road maps” of broadband internet options. Second, whether or not the Commission decides to take an open and transparent approach with regard to carrier-provided data, the agency should encourage other private sector entities, other government agencies, and could itself begin to collect and publish information about the specific locations (at a Census Block or household level), the actual speeds, and the prices at which specific broadband providers offer high-speed internet service. Both of these approaches – the carrier-focused approach [...] and the consumer-focused approach [...] will be considered within this comment.<sup>7</sup>

The arguments for greater transparency of broadband data are as true today as they were a decade ago. Indeed, with the benefit of hindsight, we can see the overwhelming public benefits to be had from public disclosure of information that is, after all, completely discoverable by any given broadband user. In its comments in 2009 (and prior comments in 2008), BroadbandCensus.com articulated a philosophy that became more widely adopted with the launch of the State Broadband Initiative and the creation of the National Broadband Map in February 2011.

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<sup>5</sup> *Id.*, para. 54.

<sup>6</sup> In the Matter of A National Broadband Plan for Our Future, FCC 09-31, April 8, 2009 (“NOI”).

<sup>7</sup> Comments of BroadbandCensus.com In Response to the NOI, page 4.

While this philosophy has become more widespread, the conclusion of the State Broadband Initiative program in 2014 puts even more pressure on the Commission to ensure that Form 477 data is indeed made publicly available. This is increasingly important as multiple public and open data sets, including our own data sets, facilitate public verification tools about broadband speeds, prices, availability and competition. It continues to make little sense to shield the information from Form 477 from public view. We urge the Commission toward public disclosure.<sup>8</sup>

**The FCC Appropriately Recognizes the Need for Data at the Address and Sub-Census Block Level and Should Be Encouraged in Pursuit of Obtaining and Publishing Such Data**

In our experience in building out address-level availability tools based on data provided from major internet service providers, we have found that address-level availability results are the most useful when there is both a fully qualified address and a fully-qualified geocode. While

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<sup>8</sup> BroadbandCensus.com made these comments in the 2009 NOI, *Id.*, at page 9, “How the Public is Served by Public Disclosure of Carrier Broadband”:

“There are two basic sources from which to collect broadband data. One can collect data from broadband providers directly, or from government entities that obtain it directly from the providers. Alternatively, one can collect data from broadband consumers. We call this latter approach – collecting information from users – “crowdsourcing” broadband data. Crowdsourcing can be done either by inviting citizens to a website, like BroadbandCensus.com, to participate in a series of questions about their broadband service and take a speed test collecting actual broadband connection information. Alternatively, consumers and internet users may be polled directly over the telephone, or in person. There are pros and cons to both the provider-focused and the consumer-focused approach to broadband data collection. Broadband Census’ crowdsourcing approach is a natural extension of the ability of individuals to collaborate about the Internet by using the Internet. One of the most important functions of the Internet is to cast sunlight upon the operations of government and other entities. BroadbandCensus.com is an exercise this: bringing disparate individuals together to engage online in a common purpose. That purpose is to learn and share information about their internet options.

“Understanding the availability of broadband within a particular ZIP code, Census Block or household address is one important purpose for this information-sharing. But there are other vitally important purposes, too: [U]nderstanding competition in the broadband marketplace, understanding the speeds and service quality of broadband providers, and understanding and comparing internet prices. In the realm of broadband policy, attention is increasingly focusing not only on broadband penetration, but on available speeds, bandwidth caps, and cost per Megabit or Gigabit of data.”

one or the other can provide useful insights, having both an addresses and a geocode that are standardized will cut down on the ambiguity of results.

We offer to major pieces of advice to help steer the Commission toward a better path as it pursues address-level and sub-Census Block-level availability:

First, the Commission should offer a standardized tool that allows providers to geocode and standardize their addresses. If providers are allowed to use different tools, the data won't be useful as there will be very little way to control for the quality of the submitted data. In our tests, we've seen geocodes from two different reputable providers be thousands of feet apart. Standardizing with one tool eliminates some of the ambiguity.

Second, with the Commission offering such a standardized tool, we would urge that the Commission not rely upon any tool that uses approximations of geocodes such as a ZIP+4 centroid. While many services do offer lower-cost geocoding using this method, it is not appropriate or accurate enough to make informed decisions for stakeholders. Based on our experience and testing of different geocoding solutions, and after thoroughly testing more than 10 geocoding solutions and suites including federally-available tools, we recommend Google and Mapbox as the two companies that offer the most complete and accurate offerings.

In regard to how address-level and sub-Census Block-level data should be used, BroadbandNow has a new technology to unlock address-level availability on all of our tools to all of our users. Yet we simply lack a granular enough dataset to power it. Please see the proof of concept at <https://findbroadband.com>, where carriers have provided "on net" addresses. The tool falls back to the Census Block availability when "on net" address are not available. The prospect of being able to power millions of searches with accurate address-level availability could be an enormous benefit to the entire broadband ecosystem. With this mind, we urge the FCC to probe Form 477 data-collection at the most granular level possible. If consumers and businesses don't know of their broadband options, neither they nor the providers will benefit.

**As Broadband Data is Continuously Evolving, Halting the Semi-Annual Collection of  
Form 477 Data Would Be A Mistake**

A semi-annual collection is vital, and the Commission should be extremely wary about considering a less frequent data collection cycle. This has been exacerbated by the large delay associated with the current release cycle, in which the Form 477 data collected as of June 30, 2016, was released on June 6, 2017.

The freshness of data is especially important to consumers, businesses, and government organizations that use Form 477 through BroadbandNow.com, FindBroadband.com, and others tools. The most frequent complaint from the users of these sites, which have powered more than 13 million searches, is that the data is stale by the time it is publicly published.

Rather than moving toward less frequent data collection, the FCC should be considering systems and processes for the continuous collection and release of broadband data. This would enable consumers and governments to obtain the most clear understanding possible of the essential broadband infrastructure in their area.

**Conclusion**

The FCC's decision to consider making more broadband data, more publicly available, is a positive and welcome step. Doing so will enhance public, business, and community confidence in information about the availability and speeds of broadband options. As the Commission wrestles with the appropriate tools to deal with address-level and sub-Census Block-level broadband data, we encourage the Commission to offer a standardized tool for



allowing providers to geocode addresses, and to steer clear of tools that approximate geocodes such as ZIP+4 centroid. Finally, the Commission should not fall prey to the argument that the Form 477 should be annually collected. Such would be a step in the wrong direction.

Respectfully submitted,

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